

REMARKS

This Amendment is in response to the Office Action of April 19, 2002. Applicant respectfully submits that all the claims presently on file are in condition for allowance, which action is earnestly solicited.

THE SPECIFICATION

Applicant has amended two paragraphs in the specification, at page 1, lines 4 - 8, and page 13, line 13 through page 14, line 5, mainly to add missing information about a related patent application.

THE DRAWINGS

Applicant submits herewith for approval by the Examiner, a proposed correction to FIG. 2, along with a formal, corrected FIG. 2.

THE CLAIMS

REJECTION UNDER 35 USC 103

Claims 1 - 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kravets et al., ("Kravets"), US Patent No. 6,363,377 in view of Nasr et al., ("Nasr"), US Patent No. 6,263,332. Applicant respectfully traverses this rejection and submits that the claims on file are not obvious in view of Kravets and Nasr, and are patentable thereover. In support of this position, Applicant submits the following arguments:

A. Legal Standards for Obviousness

The following are court opinions set the general standards in support of Applicant's position of non obviousness, with emphasis added for added clarity:

- **"Obviousness cannot be established** by combining the teachings of the prior art to produce the claimed invention, **absent some teaching or suggestion** supporting the combination." *In re Fine*, 837 F.2d at 1075, 5 USPQ2d at 1598 (citing *ACS Hosp. Sys. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)). **What a reference teaches** and whether it teaches toward or **away from the claimed invention** are questions of fact. See *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 960-61, 220 USPQ 592, 599-600 (Fed. Cir. 1983), cert. denied, 469 U.S. 835, 83 L. Ed. 2d 69, 105 S. Ct. 127 (1984)."
- "When a rejection depends on a combination of prior art references, there must be **some teaching, suggestion, or motivation** to combine the references. See *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987)."
- "With respect to core factual findings in a determination of patentability, however, the **Board cannot simply reach conclusions based on its own understanding or experience** -- or on its assessment of what would be basic knowledge or common sense. **Rather, the Board must point to some concrete evidence in the record** in support of these findings." See *In re Zurko*, 258 F.3d 1379 (Fed. Cir. 2001).
- "We have noted that **evidence of a suggestion, teaching, or motivation to combine** may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, see *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), *Para-Ordinance Mfg. v. SGS Imports Intern., Inc.*, 73 F.3d 1085, 1088, 37 USPQ2d 1237, 1240 (Fed. Cir. 1995), although "the suggestion more often comes from the teachings of the pertinent references," *Rouffet*, 149 F.3d at 1355, 47 USPQ2d at 1456. The range of sources available, however, does not diminish the requirement for actual evidence. That is, **the showing must be clear and particular**. See, e.g., *C.R. Bard*, 157 F.3d at 1352, 48 USPQ2d at 1232. **Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence."** E.g., *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993) ("Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact."); *In re Sichert*, 566 F.2d 1154, 1164, 196

USPQ 209, 217 (CCPA 1977).” See *In re Dembiczak*, 175 F. 3d 994 (Fed. Cir. 1999).

- “To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.” See *In re Rouffet*, 149, F.3d 1350 (Fed. Cir. 1998).

B. Kravets et al. Patent

Kravets generally describes a tool to be used with a search engine for an information management system, that includes methods for refining, filtering, and organizing search queries and search results. A query tuner in the tool allows a user to automatically reformulate a query in order to find a reasonable number of matching documents from the search engine by selectively modifying individual search terms to be weaker or stronger and concurrently requesting a plurality of searches, each with a respectively different modified query. The tool also uses a dynamic filter which employs a dynamic set of record tokens to restrict the results of an arbitrary search query to selectively include or exclude records which correspond to the set of record tokens. (Refer to Abstract and column 2, lines 42-52, emphasis added)

“The system then begins to process each option individually. First, the system checks, in step 14, if the query tuner option has been selected. If the option has been selected then, in step 16, the query refinement process is initiated and the query is modified prior to the search being performed. The search is then performed as shown in step 18.

The system, in step 20, checks for the existence of additional processing options to be performed. If the system determines, in step 22, that the dynamic filter option has

been selected, then the dynamic filter process is performed in step 24. The system, in step 26, determines if the result organizer option has been selected. If this option has been selected, then in step 28, the results organization process is performed. Next, after all options have been processed, the system displays the results in step 30. The system concludes with the user selection of the results as shown in step 32 and, optionally, the user saves the results of the query at step 34.” (Refer to column 4, lines 6-23, emphasis added)

Claim 1 of Kravets patent provides further clarity to the meaning of the patented invention, and is reproduced herein for ease of reference, with emphasis added, as follows:

“1. A method for generating search queries to be sent to a search engine for searching a information management system, comprising the steps of:

- a) receiving an initial search query;
- b) converting the initial search query to general boolean language;
- c) identifying a level in a respective hierarchy tree for each search query item in the initial search query;
- d) formulating additional related search queries by substituting items from the respective hierarchy tree for selected items in the query, the substituted item having a level in the hierarchy tree that is greater than or less than the level of the query item in the initial query; and
- e) forwarding the initial search query and the additional search queries in parallel to the search engine.”

C. Nasr et al. Patent

Applicant agrees with the Examiner that Nasr describes an abstract engine.

D. Claim 1

Applicant submits that the combination of Kravets and Nasr does not disclose the following features or limitations of claim 1 (emphasis added):

“1. A system for **automatically generating dynamic search abstracts**, comprising:
a crawler for crawling documents and **acquiring metadata and link information** from the documents;
a metadata repository for storing the metadata acquired by the crawler;
a link repository for storing link information acquired by the crawler;
an abstract engine for generating abstracts of the documents from the metadata;
an indexing engine for periodically indexing the metadata and the link information;
a search engine for applying a search query to the metadata indexed by the indexing engine, to generate a preliminary result set containing selected abstracts;
and
wherein the **search engine inquires if the link repository contains new link information about the preliminary result set, and updates the selected abstracts based on the new link information, if any, to generate the dynamic search abstracts.**”

The office action states that Kravets teaches a system that includes “ ‘automatically generating dynamic search abstracts’ [see Abstract, col 2, line 53-56], fig 11]. Applicant respectfully traverses the characterization of the Kravets method as “automatically” generating dynamic search “abstracts”, and submits the following arguments:

(1) As presented earlier, the user's interface is required to select the desired options, absence of which will not activate the system. **As a result, the Kravets system cannot be said to be automatic.**

(2) As stated by the Examiner, “**Kravets does not specifically teach ‘an abstract engine’** although Kravets specifically suggests abstract query language that can easily be mapped to any particular engine's language.” **As a result, the Kravets system, by**

itself, does not generate search abstracts (the combination with Nasr to be discussed below).

The office action states that "Kravets teaches search engine for refining, filtering and organizing search queries and search results as detailed in Abstract, especially fig 11 is the query results corresponds to abstracts, 'a crawler for crawling documents and acquiring metadata and link information from the documents' [col 1, line 43-53, col 10, line 12-34, line 66-67, col 11, line 1-6]." Applicant traverses this characterization of Kravets, and submits that Kravets does not acquire link information. The absence of such teaching (i.e., link information) presents a significant departure from the present invention, in that the link information is an element of claim 1, and is important for the proper functioning of the claimed system.

The office action also states that Kravets suggests "an indexing engine for periodically indexing the metadata and the link information" [col 9, line 10-22]." Applicant submits that the Kravets indexing engine does not index link information, since no such link information is acquired in the first place.

The office action states that "Kravets teaches generating dynamic set of URLs as detailed inn col 9, line 10-12." Applicant submits that the URLs generated by the Kravets represent the pages visited "last week," and as result, these URLs are not the same as, or equivalent to "new link information about the preliminary result set" as recited in the present claim 1. In essence, the URLs are not used by the Kravets system to generate the dynamic search abstracts.

The office action also states that the Kravets "search engine inquires if the link repository contains new link information about preliminary result set, and updates the selected abstracts based on the new link information, if any, to generate the dynamic search abstracts" [col 11, line 33-41, col 12, line 6-23, line 42-52]." Applicant has

reproduced below the paragraphs in Kravets that are cited in the office action, and submits that these paragraphs do not seem to describe a "link repository" as recited in claim 1.

"As with the meta-data, there is a hierarchy for the keywords. For example, as shown in FIG. 10(a), the top of the hierarchy is represented by cell 1010 and "keyword" corresponds to the most restrictive search query. Second on the hierarchy is cell 1012 corresponding to a broader search that can be done with the "all the English stemmings of keyword". Cell 1014 is at the bottom of the hierarchy and corresponds to the broadest search query related to "keyword or any of its synonyms".

The formulation of related queries according the query hierarchies is illustrated based on a sample query $Q = ((\text{title}; \text{cryptographic}) \text{ BEFORE.sub.1 } (\text{title}; \text{protocols})) \text{ AND } ((\text{English language}) \text{ AND } (\text{dated after Jan. 1, 1997}))$. The term item is used to refer to any atomic part of the query: a meta-datum, a keyword or a Boolean operator. For example, Q contains the following set of items {title, cryptographic, BEFORE.sub.1, title, protocols, AND, English language, AND, dated after Jan. 1, 1997}. For each query item t , define $h(t)$ to be the node in the hierarchy forest corresponding to the item t . Related queries consists of a set of queries, each of which takes the original user query and modifies some items in it by either restricting or broadening them according to the hierarchy forest. The act of broadening (restricting) a query item t corresponds to using a descendant (an ancestor) of $h(t)$ in place of t within Q . For example, one set of related queries for our sample query Q is shown in Table 3.

The exemplary tree shown in FIG. 10(b) indicates that the search can be contracted or restricted by moving up the tree. In addition, it indicates that the search can be expanded by moving down the tree. For example, a search limited to $x \text{ AND } y$ according to cell 1040 can be restricted by moving up the tree and searching according to cell 1050 where the search is restricted to $x \text{ NEAR } y$. In contrast, the search can be expanded by moving down the tree and searching for only x according to cell 1030 or searching for only y according to cell 1035. The search can be further expanded by searching for $x \text{ OR } y$ according to cell 1020."

In addition, the office action further states that "Kravets does not specifically teach 'an abstract engine' although Kravets specifically suggests abstract query language that can easily be mapped to any particular engine's language [see col 10, line 13-14]. On the other hand, Nasr teaches a system which including 'an abstract engine' [see fig 1B,

element 30, col 3, line 5-10]. It would have been obvious one of the ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Nasr et al., into refining and improving search queries and organizing the results of a search query by different and overlapping criteria of Kravets because they both are directed to query processing."

Applicant agrees that the Nasr patent describes an abstract engine, and further submits that abstract engines have been well known and used. However, even if Kravets and Nasr (or other known abstract engines) were to be combined, the foregoing elements and limitations would still be lacking from the main reference, namely Kravets, and thus the combination design would still not offer the same features, nor include the same elements and limitations as recited in claim 1.

To conclude, independent claim 1 is not obvious in view of Kravets in view of Nasr, and as a result, claim 1 and the claims dependent thereon are allowable, and such allowance is respectfully requested.

E. Claims 6 and 11

Independent claims 6 and 11 are allowable for similar reasons as presented earlier in favor of allowance of claim 1, since claims 6 and 11 contain substantially similar elements and limitations as in claim 1. As a result, the independent claims 6 and 11 and the claims dependent thereon are allowable, and such allowance is respectfully requested.

NEW CLAIMS

The new claims 17 - 22 are similarly allowable for containing a subject matter that is comparable to that of claims 1 through 16.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

THE SPECIFICATION

The paragraph at page 1, lines 4 - 8 has been replaced with the following paragraph:

CROSS-REFERENCE TO RELATED [APPLICATIONS] APPLICATION

This application is related to patent application [Serial No. _____.] Serial No. 09/500,633, titled "Using Annotative Link Information to Produce Quality Abstracts in Search Engines", filed on February 9, 200, which is [filed by] assigned to the same assignee as this application [on February 9, 2000], and which is incorporated herein by reference in its entirety.

The paragraph at page 13, line 13 through page 14, line 5 has been replaced with the following paragraph:

In a preferred embodiment, the abstract engine 140 does not simply prepare "static" abstracts, but rather "quality" abstracts. As used herein, "static" abstracts are abstracts that include information gathered from candidate web pages (i.e., web pages related to the abstracts), without consideration to information about the candidate web sites gathered from other sources. These "static" abstracts would have been presented to the user using traditional search methods prior to the advent of the abstract update system 10. The "static" abstracts can be stored in the indexed data repository 175 or in any other suitable data store for later use by the search engine 17. "Quality" abstracts refer to abstracts that supplement the "static" abstracts, and that account for information gathered from sources other than the candidate web sites, as explained more fully in patent application [Serial No. _____.] Serial No. 09/500,633, titled "Using Annotative Link Information to Produce Quality Abstracts in Search Engines".

THE DRAWINGS

Pending approval by the Examiner, FIG. 2 has been replaced with a substitute FIG. 2.

THE CLAIMS

Claim 11 has been amended, as follows:

11. (Once amended) A method for automatically generating dynamic search abstracts, comprising:

crawling documents and acquiring metadata and link information from the documents;

storing the metadata acquired by the crawler in a metadata repository ;

storing link information acquired by the crawler in a link repository;

[for] generating abstracts of the documents from the metadata;

periodically indexing the metadata and the link information;

applying a search query to the metadata to generate a preliminary result set containing selected abstracts; and

inquiring if the link repository contains new link information about the preliminary result set, and updating the selected abstracts based on the new link information, if any, to generate the dynamic search abstracts.

New claims 17 - 22 have been added, as follows:

--17. (New) A computer program product having instruction codes for automatically generating dynamic search abstracts, comprising:

a first set of instruction codes that acquire documents and metadata and link information from the documents;

a metadata repository that store the metadata;
a link repository that store the link information;
a second set of instruction codes that generate abstracts of the documents from the metadata;
a third set of instruction codes that periodically index the metadata and the link information;
a fourth set of instruction codes that apply a search query to the metadata, to generate a preliminary result set containing selected abstracts; and
a fifth set of instruction codes that inquire if the link repository contains new link information about the preliminary result set, and that update the selected abstracts based on the new link information, if any, to generate the dynamic search abstracts.

18. (New) The computer program product according to claim 17, wherein updating a selected abstract includes gathering information from a source other than a candidate site associated with the selected abstract.

19. (New) The computer program product according to claim 17, wherein if the link repository does not contain new link information, presenting abstracts previously stored in the link repository.

20. (New) The computer program product according to claim 17, further including applying a query request to the metadata and the link information indexed by the indexing engine.

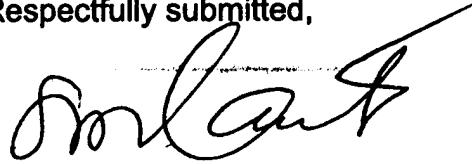
21. (New) The computer program product according to claim 17, further including transforming the dynamic search abstracts into a user browsable form.

22. (New) The computer program product according to claim 17, further including storing persistent link information and maintaining a crawl history in the link repository.--

CONCLUSION

All the claims presently on file in the present application are in condition for immediate allowance, and such action is respectfully requested. If it is felt for any reason that direct communication would serve to advance prosecution of this case to finality, the Examiner is invited to call the undersigned at the below-listed telephone number.

Respectfully submitted,



Date: July 9, 2002

Samuel A. Kassatly Law Office
6819 Trinidad Drive
San Jose, CA 95120
Tel: (408) 323-5111
Fax: (408) 323-5112

Samuel Kassatly
Attorney for Applicant
Reg. No. 32,247
Tel. (408) 323-5111

Attachments: FIG. 2 redlined
FIG. 2 formal and corrected